

REMARKS

Applicant respectfully requests reconsideration in view of the amendment and following remarks. The applicant has rewritten claim 3 into independent form and has also incorporated the features of claim 2 into claim 3. Since the applicant cancelled the lanthanoid from claim 3, the applicant had to cancel the lanthanoid (elements with the atomic no. of 57-71) from claim 4.

Claims 1-16 are rejected under 35 U.S.C. 112 as failing to comply with the written description requirement. Claims 1-16 are rejected under 35 U.S.C. 112 because the specification does not reasonably provide enablement for any ligand/metal combination other than 2-phenylpyridine and iridium. Claims 1-8 and 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by Konno et al. (*Chemistry Letters*, 2003, 252-253, Released February 12, 2003) (“Konno”). The applicant respectfully traverses these rejections.

Rejections Under 35 U.S.C. §112

Claims 1-16 are rejected as failing to comply with the written description requirement. In order to overcome this rejection, the applicant has incorporated the features of claims 2 and 3 into claim 1. This claim is presented as amended claim 3. In addition, the applicant has limited the definition of the symbol M to transition metals. Amended claim 3 therefore no longer relates to any metals or any orthometalation reactions, but relates to the synthesis of orthometalated transition metal complexes of formula (1) to (6). In these formulas, the structures of the units ML, ML* and ML** are given by formulas (7) to (9). The chemical structures embraced by these formulas are all very similar to each other as all these structures relate to the same general ligand system. This ligand binds to the metal via a cyclic group CyD, which is a heterocyclic group and which binds via a donor atom, and a cyclic group CyC, which binds via a carbon atom. These chemical structures are furthermore very similar to the ligand 2-phenylpyridine,

which is used in the examples of the present application. Due to the chemical similarity of the metal complexes and ligands of amended claim 3, these compounds show a similar chemical reactivity and can all be synthesized by a process as claimed in amended claim 3. For the above reasons, this rejection should be withdrawn.

Claim Rejection Under 35 U.S.C. §102

Claims 1-8 and 10-14 are rejected as being anticipated by Konno. Konno is cited in the applicant's specification at page 5, starting at line 21. Konno discloses the synthesis of a tris-ortho-metalated iridium complex by using microwave irradiation at room temperature. Contrary to what the Examiner asserted the temperature of reaction taught by Konno is only room temperature and therefore, Konno actually teaches away from the applicant's claimed reaction temperature (100 to 210°C). For this reason alone the anticipation rejection should be withdrawn.

The applicant does not believe that an obviousness rejection can be made for the following reasons. Again, Konno teaches that the reaction is at room temperature and not the temperature claimed by the applicant (100 to 210°C). There is no teaching in Konno to use an elevated temperature, let alone a temperature in the range from (100 to 210°C) as is claimed by the applicant.

Furthermore, the use of microwave irradiation at room temperature as described by Konno leads to yields in the order of only 75% (see table 1 of Konno). This is confirmed with the applicant's comparative example 4 (using microwave at 25 °C) (see pages 14 and 15 of the specification and Table 2 at page 9 of the specification. There is an inadvertent error in Example

4 on page 9 (Table 2) of the description. The reaction temperature for this reaction should be 25°C (instead of 190°C), as given correctly in Example 4 on page 15 of the specification.

The applicant agrees that the use of microwave might result in an increase of the reaction temperature due to the vibration of the molecules. However, in the process as claimed in amended claim 3, the reaction mixture is heated to 100 to 210°C in addition to the microwave irradiation. The result from the additional heating can be seen in Examples 3 and 4 (summarized in Table 2). In Example 3, the reaction mixture is heated to 190°C. The product is obtained in 94-96 % yield in a purity of 99.9%. In contrast, in Example 4, the reaction mixture is not heated in addition to the microwave irradiation (like Konno), but the reaction is carried out at room temperature (25°C). The product is obtained in only 77-81% yield in a purity of 97.6%. These results show clearly the positive synergistic effect when the reaction mixture is heated in addition to the microwave irradiation. These are surprising and unexpected results, which could not have been predicted from Konno. For the above reasons, a 35 U.S.C. 103 rejection should not be made.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 14113-00050-US from which the undersigned is authorized to draw.

Dated: October 29, 2008

Respectfully submitted,

Electronic signature: /Ashley I. Pezzner/
Ashley I. Pezzner
Registration No.: 35,646
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P. O. Box 2207
Wilmington, Delaware 19899-2207
(302) 658-9141
(302) 658-5614 (Fax)
Attorney for Applicant